

CLAIMS

1. A method of increasing the amount of soluble protein or peptide expressed in a host cell, comprising co-expressing in a host cell
 - a) said protein or peptide; and
 - b) a phosphatase;wherein more soluble protein is obtained where said protein or peptide is co-expressed with said phosphatase as compared to the amount of soluble protein or peptide in the absence of said co-expression.
2. The method of claim 1, wherein the protein or peptide is a heterologous protein or peptide to the host cell.
3. The method of claim 1, wherein the protein or peptide is selected from the group consisting of kinases, nuclear hormone receptor proteins, membrane-bound receptor proteins, cytokines, phosphatases, or domains or fragments thereof.
4. The method of claim 1, wherein the protein or peptide is a kinase, or a domain or fragment thereof.
5. The method of claim 1, wherein the protein or peptide is abl, or a domain or fragment thereof.
6. The method of claim 1, wherein the protein or peptide is selected from the group consisting of src, MEKK1, MASK, Mst3, and PAK4, or a domain or fragment thereof.
7. The method of claim 1, wherein the protein or peptide is a kinase, or a domain or fragment thereof.
8. The method of claim 1, wherein the host cell is a prokaryotic cell.
9. The method of claim 7, wherein the host cell is *E. coli*.
10. The method of claim 1, wherein the phosphatase is encoded in the host cell DNA.
11. The method of claim 1, wherein an expression vector is used to express said phosphatase.
12. The method of claim 10, wherein the expression vector comprises a nucleotide sequence that encodes said protein or peptide.

13. The method of claim 10, wherein said phosphatase and said protein or peptide are expressed from a bicistronic message.
14. The method of claim 10, wherein said expression vector is a plasmid.
15. The method of claim 10, wherein said expression vector is a phage.
16. The method of claim 14, wherein said expression vector is bacteriophage lambda.
17. The method of claim 10, wherein said expression vector is a virus.
18. The method of claim 1, wherein said phosphatase is a bacterial phosphatase.
19. The method of claim 1, wherein said phosphatase is bacteriophage lambda protein phosphatase.
20. A method of increasing the solubility of a protein or peptide expressed in a host cell, comprising
 - a. obtaining a host cell comprising an expression vector, wherein said expression vector comprises a nucleotide sequence encoding said protein or peptide and further comprises a nucleotide sequence encoding a phosphatase, and
 - b. growing said host cell under conditions wherein said phosphatase and said protein or peptide are expressed,wherein more soluble protein or peptide is obtained from said host cell comprising said phosphatase nucleotide sequence compared to the amount of soluble protein or peptide obtained from a host cell that does not comprise said phosphatase nucleotide sequence.
21. The method of claim 19, wherein the protein or peptide is selected from the group consisting of kinases, nuclear hormone receptor proteins, membrane-bound receptor proteins, cytokines, phosphatases, or domains or fragments thereof.
22. The method of claim 19, wherein the protein or peptide is a kinase, or a domain or fragment thereof.
23. The method of claim 19, wherein the protein or peptide is abl, or a domain or fragment thereof.

24. The method of claim 19, wherein the protein or peptide is selected from the group consisting of Src, MEKK1, MASK, Mst3, and PAK4, or a domain or fragment thereof.
25. The method of claim 19, wherein the host cell is a prokaryotic cell.
26. The method of claim 19, wherein the host cell is *E. coli*.
27. The method of claim 19, wherein the phosphatase is encoded in the host cell DNA.
28. The method of claim 19, wherein an expression vector is used to express said phosphatase.
29. The method of claim 19, wherein said phosphatase and said protein or peptide are expressed from a bicistronic message.
30. The method of claim 26, wherein said expression vector is a plasmid.
31. The method of claim 26, wherein said expression vector is a phage.
32. The method of claim 26, wherein said expression vector is bacteriophage lambda.
33. The method of claim 26, wherein said expression vector is a virus.
34. The method of claim 26, wherein said phosphatase is a bacterial phosphatase.
35. The method of claim 26, wherein said phosphatase is bacteriophage lambda protein phosphatase.
36. A method of increasing the solubility of a protein or peptide expressed in a host cell, comprising co-expressing a nucleotide sequence encoding a protein or peptide selected for expression in a soluble form in increased amounts with a nucleotide sequence encoding a phosphatase.
37. The method of claim 36, wherein the protein or peptide is selected from the group consisting of kinases, nuclear hormone receptor proteins, membrane-bound receptor proteins, cytokines, phosphatases, or domains or fragments thereof.
38. The method of claim 36, wherein the protein or peptide is a kinase, or a domain or fragment thereof.
39. The method of claim 36, wherein the protein or peptide is abl, or a domain or fragment thereof.

40. The method of claim 36, wherein the protein or peptide is selected from the group consisting of Src, MEKK1, MASK, Mst3, and PAK4, or a domain or fragment thereof.
41. The method of claim 36, wherein the host cell is a prokaryotic cell.
42. The method of claim 36, wherein the host cell is *E. coli*.
43. The method of claim 36, wherein the phosphatase is encoded in the host cell DNA.
44. The method of claim 36, wherein an expression vector is used to express said phosphatase.
45. The method of claim 43, wherein said expression vector is a plasmid.
46. The method of claim 43, wherein said expression vector is a phage.
47. The method of claim 43, wherein said expression vector is bacteriophage lambda.
48. The method of claim 43, wherein said expression vector is a virus.
49. The method of claim 43, wherein said phosphatase is a bacterial phosphatase.
50. The method of claim 43, wherein said phosphatase is bacteriophage lambda protein phosphatase.